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ABSTRACT

This report provides an account of the nature and purposes of data collected concerning the health, nutrition, and physical development of infants during the first three years of life, in order to compare the physical health of children in family or group day care and children with no previous day care experience. The data collected include the infants's birth history; detailed physical examinations of children at 6, 12, 18, and 36 months; laboratory blood tests; vision, hearing, and dental screening procedures; and interim reports from outside agencies. The factors under analysis include growth and development, the presence or absence of major and/or minor abnormalities, and the day care center's effect on children's physical development. No study conclusions have yet been reached. (ED)

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A DESCRIPTION OF THE NEW YORK CITY INFANT DAY CARE STUDY: HEALTH, NUTRITION AND PHYSICAL DEVELOPMENT

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In order to assess and compare the physical health of the children in the infant group and family day care longitudinal samples, as well as the health of the children who enter day care at 3 years of age, and the at home sample of children, it has been necessary to gather a massive amount of medical information from several sources.

From these sources, we then need to abstract, categorize and interpret data relevant to our study.

Perhaps a description of a typical work day of the medical director of the study project will highlight some aspects of the medical section's concerns and activities.

On my desk, there is a pile of papers for review. Many of these are reports we have requested from hospitals, providing us with the prenatal and birth histories of infants in the study. This is a vital information; for, in order to ascertain the comparability of the categories under study, one very significant factor is whether or not the infant was born at risk; we can determine this only by detailed knowledge of the infant's birth history. These records are reviewed meticulously by our staff abstractor, a nurse. According to guidelines developed for the study, she classifies the infant into one of the following groups;

full-term, normal

full-term, at risk; e.g., an infant who requires oxygen, at some time within the newborn period; or an infant who had a convulsion during the newborn period.

permature, without complications

premature, with complications

Another pile of papers for my review consists of the physical examination protocols that have been filled out by our staff pediatricians, who perform very detailed physical examinations of the infants at ages 6 months, 12 months, 18 months, and 36 months. Height, weight, and head circumference measurement are made at each of these examinations by paraprofessional assistants who make additional such measurements at age 24 months. The protocols are age-specific. The first pediatric examination gives us our baseline data for the infant; and each infant is examined subsequently at the aforementioned ages.

In our evaluation of the infant's health status, we also obtain the following laboratory tests (the specimens are sent to the Bureau of Laboratories of the New York City Department of Health):

1) Hemoglobin and Hematocrit levels, for detection of anemia

2) Hemoglobin electrophoresis, for detection of sickle cell disease and trait, as well as for the detection of more rare types of abnormal hemoglobins.

3) Blood lead levels, to detect any indication of excessive ingestion of lead.

This brings us to the 3rd pile of papers on my desk - the laboratory reports sent to us regularly and promptly, from the Bureau of Laboratories. Of course, I review each one.

Our health assessment of 36-month old children includes vision, hearing, and dental screening procedures, as well as routine examination and laboratory tests previously described.

The information to be obtained from these examinations is a major component in assessing the infant's current health status, as well as his pattern of growth and development; and also in providing a basis for making a comparative evaluation of the quality of medical care given to the infant by outside health resources.

This brings me to the 4th pile of papers on my desk - the interim reports we request from the sources of medical care utilized for each infant: these include hospital inpatient and outpatient departments, child health stations, private physicians, etc. We request these reports every 6 months, and expect to utilize the information thus obtained, to assess and compare the quality of care received by our various categories of infants: e.g., are examinations by our staff turning up hitherto undetected health problems such as an eye squint; is there any difference in the immunization status of 12-month old infants in family day care as compared to 12-month old infants in group day care; are there differences amongst our categories of children, with respect to the incidence of acute illnesses, chronic illnesses and so on.

In our ultimate categorization of health status, the factors under analysis include growth and development, and the presence or absence of major and/or minor abnormalities. We are developing criteria for the designation of abnormalities as major or minor.

Thus far, I have described to you the nature and purpose of some of the medical data we are collecting, in order to compare health status at a given point in an infant's life in family and group day care, as well as patterns growth and development. I have attempted to convey to you how we will measure and compare the quality of medical care given by various outside sources, to the children in the study.

Although our primary purpose in gathering this data is of course, of an evaluative nature, we have also undertaken the committment to provide a service; i.e., when, in the course of reviewing the examination protocols and laboratory reports, we come upon findings requiring further evaluation

and/or treatment (e.g., a low blood count; a heart murmur), we inform the day care center's director or surrogate, of the findings and our recommendations as to further disposition.

The Policy Committee of the study decided that this kind of communication was essential, despite the concomitant effect of influencing one of the outcome variables under study; i.e., quality of medical care received by the children.

Mine is not the only cluttered desk in our offices. Some of the information appearing on other desks is very relevant to the health status of the infants in the study; e.g., nutrition and safety data. We are attempting to ascertain the day care center's role in affecting the children's physical development, by analyzing the following areas:

1) Nutritional aspect: the director of the Bureau of Nutrition of the New York City Department of Health has undertaken an analysis of the quality of the feeding program offered by the various treatment groups to the children; this encompasses not only the food content, but also detailed information with regard to feeding techniques, interaction between care-giver and child; and the quality of food consumed - this data is being collected by standarized systematic methods by the Project staff.

2) Safety: The safety in the group centers and the family day care homes, is also being evaluated on the basis of data collected by uniform observations made by the project staff.

We are also attempting to evaluate the role of the day care centers, in carrying out our recommendations re various health problems encountered amongst the children, by our staff.

I hope the foregoing description of the medical section has provided you with some insight into the questions we are asking, and which we expect to answer, upon completion of the study.

At this point, it is too early to offer you any conclusions. Ultimately, however, we expect to know whether or not there are significant differences in the health status of children during the first 3 years of life, in family day care, and group day care, and of children who have had no previous day care experience. If there are differences, what are they?

What can we say about the quality of medical care received by children in these 3 treatment groups?

And finally, what can we suggest to improve the health supervision of children in infant day care?